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INSECT MYCOPHAGY: A PRELIMINARY BIBLIOGRAPHY

Bark beetle references marked w/ yellow

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ABSTRACT

Insects that feed on fungi are primary dispersal agents for many beneficial and pathogenic species. Nearly 300 references on the subject, published since the mid-19th century are listed in this bibliography.

Keywords: Bibliography, insect vectors, mycophagy, spores.

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For well over a century, certain insects have been known to feed on fungal fruiting bodies. Spore-eating insects have been presumed to be vectors of the fungi eaten. Only recently, however, have spores been demonstrated to remain viable after passage through an insect's digestive tract (Leach et al. 1934, Nuorteva and Laine 1972). These works have reawakened interest in the role of insect mycophagy in dissemination of pathogenic, mycorrhizal, and other fungi.

References in this bibliography are intended to provide an entry into the insect mycophagy literature. For brevity, most papers cited by earlier reviewers are not listed individually in this bibliography; i.e., papers cited by Hingley (1971), Benick (1952), Graham (1967), Weber (1972b), and Weiss (1921). The few references that I could not personally verify are marked with an asterisk and are cited as found in secondary sources.

The most frequently reported insect mycophagists are either Diptera, mainly Mycetophilidae or Phoridae, and Coleoptera, separable into bark beetles and other beetles. Agarics and "bracket" fungi (Polyporaceae) encompass most of the commonly reported substrates.

Most literature records insects extracted or reared from fungal sporocarps rather than observations of actual feeding on fungi. Complete food chains are thereby concealed, since some insects in sporocarps may be predators or casual visitors. However, such insects can also serve as carriers of spores. Food consumption rates, chemical composition, species numbers, models of food webs, etc., have rarely been reported.

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INTERNAL REPORT 63a--AN ADDENDUM

INSECT MYCOPHAGY: A PRELIMINARY BIBLIOGRAPHY II

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ABSTRACT

The initial list of insect mycophagy reported in Internal Report 63 has been almost doubled with the additions in this bibliography. As in the first bibliography, most of the new citations list insects extracted or reared from fungal sporocarps, with specific diets only rarely verified.

The most frequently reported mycophagists are either Diptera, mainly Mycetophilidae or Phoridae, and Coleoptera, separable into bark beetles and other beetles. Agarics and "bracket" fungi (Polyporaceae) encompass most of the commonly reported substrates. Despite the numerous references to insect mycophagy, many fungal and insect associations remain to be investigated.

For brevity, most papers cited by earlier reviewers, i.e., Hingley (1971), are not listed individually here. The occasional references that I was unable to verify have been asterisked.

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